

<110> KUMIAI CHEMICAL INDUSTRY CO., LTD

<120> A gene coding for scytalone dehydratase having conferring
resistance to an agricultural fungicidal agent

<130> PH-1735-PCT

<150> JP 2002-66955

<151> 2002-03-12

<160> 12

<170> PatentIn Ver. 2.1

<210> 1

<211> 516

<212> DNA

<213> Pyricularia oryzae

<220>

<221> CDS

<222> (1).. (516)

<400> 1

atg ggt tcg caa gtt caa aag agc gat gag ata acc ttc tca gac tac 48

Met Gly Ser Gln Val Gln Lys Ser Asp Glu Ile Thr Phe Ser Asp Tyr

1

5

10

15

ctg ggc ctc atg act tgc gtc tat gag tgg gca gac agc tac gac tcc	96
Leu Gly Leu Met Thr Cys Val Tyr Glu Trp Ala Asp Ser Tyr Asp Ser	
20 25 30	
aag gac tgg gat agg ctg cga aag gtc att gcg cct act ctg cgc att	144
Lys Asp Trp Asp Arg Leu Arg Lys Val Ile Ala Pro Thr Leu Arg Ile	
35 40 45	
gac tac cgc tcc ttc ctc gac aag ctc tgg gag gca atg ccg gcc gag	192
Asp Tyr Arg Ser Phe Leu Asp Lys Leu Trp Glu Ala Met Pro Ala Glu	
50 55 60	
gag ttc gtc ggc atg gtc tcg agc aag cag atg ctg ggc gac ccc acc	240
Glu Phe Val Gly Met Val Ser Ser Lys Gln Met Leu Gly Asp Pro Thr	
65 70 75 80	
ctc cgc acg cag cac ttc atc ggc ggc acg cgc tgg gag aag gtg tcc	288
Leu Arg Thr Gln His Phe Ile Gly Gly Thr Arg Trp Glu Lys Val Ser	
85 90 95	
gag gac gag gtc atc ggc tac cac cag ctg cgc gtc ccg cac cag agg	336
Glu Asp Glu Val Ile Gly Tyr His Gln Leu Arg Val Pro His Gln Arg	
100 105 110	
tac aag gac acc acc atg aag gag gtc acc atg aag ggc cac gcc cac	384
Tyr Lys Asp Thr Thr Met Lys Glu Val Thr Met Lys Gly His Ala His	
115 120 125	

tcg gca aac ctt cac tgg tac aag aag atc gac ggc gtc tgg aag ttc 432
 Ser Ala Asn Leu His Trp Tyr Lys Lys Ile Asp Gly Val Trp Lys Phe
 130 135 140

gcc ggc ctc aag ccc gat atc cgc tgg ggc gag ttc gac ttt gac agg 480
 Ala Gly Leu Lys Pro Asp Ile Arg Trp Gly Glu Phe Asp Phe Asp Arg
 145 150 155 160

atc ttt gag gac gga cgg gag acc ttt ggc gac aaa 516
 Ile Phe Glu Asp Gly Arg Glu Thr Phe Gly Asp Lys
 165 170

<210> 2

<211> 172

<212> PRT

<213> *Pyricularia oryzae*

<400> 2

Met Gly Ser Gln Val Gln Lys Ser Asp Glu Ile Thr Phe Ser Asp Tyr
 1 5 10 15

Leu Gly Leu Met Thr Cys Val Tyr Glu Trp Ala Asp Ser Tyr Asp Ser
 20 25 30

Lys Asp Trp Asp Arg Leu Arg Lys Val Ile Ala Pro Thr Leu Arg Ile
 35 40 45

Asp Tyr Arg Ser Phe Leu Asp Lys Leu Trp Glu Ala Met Pro Ala Glu
 3/11

50	55	60	
Glu Phe Val Gly Met Val Ser Ser Lys Gln Met Leu Gly Asp Pro Thr			
65	70	75	80
Leu Arg Thr Gln His Phe Ile Gly Gly Thr Arg Trp Glu Lys Val Ser			
	85	90	95
Glu Asp Glu Val Ile Gly Tyr His Gln Leu Arg Val Pro His Gln Arg			
100	105	110	
Tyr Lys Asp Thr Thr Met Lys Glu Val Thr Met Lys Gly His Ala His			
115	120	125	
Ser Ala Asn Leu His Trp Tyr Lys Lys Ile Asp Gly Val Trp Lys Phe			
130	135	140	
Ala Gly Leu Lys Pro Asp Ile Arg Trp Gly Glu Phe Asp Phe Asp Arg			
145	150	155	160
Ile Phe Glu Asp Gly Arg Glu Thr Phe Gly Asp Lys			
165	170		

<210> 3

<211> 516

<212> DNA

<213> *Pyricularia oryzae*

<220>

<221> CDS

<222> (1).. (516)

<400> 3

atg ggt tcg caa gtt caa aag agc gat gag ata acc ttc tca gac tac 48
Met Gly Ser Gln Val Gln Lys Ser Asp Glu Ile Thr Phe Ser Asp Tyr
1 5 10 15

ctg ggc ctc atg act tgc gtc tat gag tgg gca gac agc tac gac tcc 96
Leu Gly Leu Met Thr Cys Val Tyr Glu Trp Ala Asp Ser Tyr Asp Ser
20 25 30

aag gac tgg gat agg ctg cga aag gtc att gcg cct act ctg cgc att 144
Lys Asp Trp Asp Arg Leu Arg Lys Val Ile Ala Pro Thr Leu Arg Ile
35 40 45

gac tac cgc tcc ttc ctc gac aag ctc tgg gag gca atg ccg gcc gag 192
Asp Tyr Arg Ser Phe Leu Asp Lys Leu Trp Glu Ala Met Pro Ala Glu
50 55 60

gag ttc gtc ggc atg gtc tcg agc aag cag gtg ctg ggc gac ccc acc 240
Glu Phe Val Gly Met Val Ser Ser Lys Gln Val Leu Gly Asp Pro Thr
65 70 75 80

ctc cgc acg cag cac ttc atc ggc ggc acg cgc tgg gag aag gtg tcc 288
Leu Arg Thr Gln His Phe Ile Gly Gly Thr Arg Trp Glu Lys Val Ser
85 90 95

gag gac gag gtc atc ggc tac cac cag ctg cgc gtc ccg cac cag agg 336
 Glu Asp Glu Val Ile Gly Tyr His Gln Leu Arg Val Pro His Gln Arg

100

105

110

tac aag gac acc acc atg aag gag gtc acc atg aag ggc cac gcc cac 384
 Tyr Lys Asp Thr Thr Met Lys Glu Val Thr Met Lys Gly His Ala His

115

120

125

tcg gca aac ctt cac tgg tac aag aag atc gac ggc gtc tgg aag ttc 432
 Ser Ala Asn Leu His Trp Tyr Lys Lys Ile Asp Gly Val Trp Lys Phe

130

135

140

gcc ggc ctc aag ccc gat atc cgc tgg ggc gag ttc gac ttt gac agg 480
 Ala Gly Leu Lys Pro Asp Ile Arg Trp Gly Glu Phe Asp Phe Asp Arg

145

150

155

160

atc ttt gag gac gga cgg gag acc ttt ggc gac aaa 516
 Ile Phe Glu Asp Gly Arg Glu Thr Phe Gly Asp Lys

165

170

<210> 4

<211> 172

<212> PRT

<213> *Pyricularia oryzae*

<400> 4

Met Gly Ser Gln Val Gln Lys Ser Asp Glu Ile Thr Phe Ser Asp Tyr

1	5	10	15
Leu Gly Leu Met Thr Cys Val Tyr Glu Trp Ala Asp Ser Tyr Asp Ser			
20	25	30	
Lys Asp Trp Asp Arg Leu Arg Lys Val Ile Ala Pro Thr Leu Arg Ile			
35	40	45	
Asp Tyr Arg Ser Phe Leu Asp Lys Leu Trp Glu Ala Met Pro Ala Glu			
50	55	60	
Glu Phe Val Gly Met Val Ser Ser Lys Gln Val Leu Gly Asp Pro Thr			
65	70	75	80
Leu Arg Thr Gln His Phe Ile Gly Gly Thr Arg Trp Glu Lys Val Ser			
85	90	95	
Glu Asp Glu Val Ile Gly Tyr His Gln Leu Arg Val Pro His Gln Arg			
100	105	110	
Tyr Lys Asp Thr Thr Met Lys Glu Val Thr Met Lys Gly His Ala His			
115	120	125	
Ser Ala Asn Leu His Trp Tyr Lys Lys Ile Asp Gly Val Trp Lys Phe			
130	135	140	
Ala Gly Leu Lys Pro Asp Ile Arg Trp Gly Glu Phe Asp Phe Asp Arg			
145	150	155	160

Ile Phe Glu Asp Gly Arg Glu Thr Phe Gly Asp Lys

165

170

<210> 5

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 5

gcagtgatac ccacaccaaa g

21

<210> 6

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 6

ttatttgtcg gcaaaggtct cc

22

<210> 7

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 7

agttcgaact ggaattcaac cggcacgcat gatgcatgca tttt

44

<210> 8

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 8

atgggttcgc aagttcaaaa g

21

<210> 9

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 9

gtggcccttc atggtgacct cct

23

<210> 10

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 10

acaagctctg ggaggcaatg

20

<210> 11

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 11

atcgtcgacg tgaattcgtc ttgtaaaagc cgccaac

37

<210> 12

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 12

ttcgtcggca tggctctcgag catctag

27